EXPERIMENT NAME 2: Dimension table and Fact table

```
-- Create Customer Dimension Table
CREATE TABLE Customer (
CustomerID INT PRIMARY KEY,
CustomerName VARCHAR(50),
CustomerLocation VARCHAR(50)
);


 -- Insert Data into Customer Dimension Table
INSERT INTO Customer (CustomerID, CustomerName, CustomerLocation) VALUES
(1, 'Mayur', 'Delhi'),
(2, 'Harshal', 'Mumbai'),
(3, 'Akshay', 'Bangalore'); -- Create Product Dimension Table
CREATE TABLE Product (
ProductID INT PRIMARY KEY,
ProductName VARCHAR(50),
ProductCategory VARCHAR(50)
);
-- Insert Data into Product Dimension Table
INSERT INTO Product (ProductID, ProductName, ProductCategory) VALUES
(1, 'Laptop', 'Electronics'),
(2, 'Mobile Phone', 'Electronics'),
(3, 'Desk Chair', 'Furniture'); -- Create Date Dimension Table
CREATE TABLE DateDimension (
DateID INT PRIMARY KEY,
Date DATE,
Month VARCHAR(20),
Year INT
);

 -- Insert Data into Date Dimension Table

INSERT INTO DateDimension (DateID, Date, Month, Year) VALUES
(1, '2024-01-01', 'January', 2024),
(2, '2024-02-01', 'February', 2024),
(3, '2024-03-01', 'March', 2024); -- Create Sales Fact Table
CREATE TABLE SalesFact (
SaleID INT PRIMARY KEY,
DateID INT,
```

```
CustomerID INT,
ProductID INT,
Quantity INT,
TotalAmount DECIMAL(10, 2),
FOREIGN KEY (DateID) REFERENCES DateDimension(DateID),
FOREIGN KEY (CustomerID) REFERENCES Customer(CustomerID),
FOREIGN KEY (ProductID) REFERENCES Product(ProductID)
);

-- Insert Data into Sales Fact Table
INSERT INTO SalesFact (SaleID, DateID, CustomerID, ProductID, Quantity, TotalAmount)
VALUES
(1, 1, 1, 1, 2, 2000.00),
(2, 2, 2, 2, 1, 500.00),
(3, 3, 3, 3, 5, 1500.00);
```

Customer

CustomerID	CustomerName	CustomerLocation
1	Mayur	Delhi
2	Harshal	Mumbai
3	Akshay	Bangalore

DateDimension

DateID	Date	Month	Year
1	2024-01-01	January	2024
2	2024-02-01	February	2024
3	2024-03-01	March	2024

Product

ProductID	ProductName	ProductCategory
1	Laptop	Electronics
2	Mobile Phone	Electronics
3	Desk Chair	Furniture

SalesFact

SaleID	DateID	CustomerID	ProductID	Quantity	TotalAmount
1	1	1	1	2	2000
2	2	2	2	1	500
3	3	3	3	5	1500

EXPERIMENT NAME 3: Implementation of OLAP operations: Slice, Dice, Rollup, Drilldown and Pivot based on experiment 1 case study

PRODUCT	QUARTER	REGION	SALES
A	Q1	Europe	10
A	Q1	America	20
A	Q2	Europe	20
A	Q2	America	50
A	Q3	America	20
A	Q4	Europe	10
A	Q4	America	30
B	Q1	Europe	40
B	Q1	America	60
B	Q2	Europe	20
B	Q2	America	10
B	Q3	America	20
B	Q4	Europe	10
B	Q4	America	40

ROLL UP

```
SELECT QUARTER, REGION, SUM(SALES)
FROM SALESTABLE
GROUP BY ROLLUP (QUARTER, REGION)
```

QUARTER	REGION	SALES
Q1	Europe	50
Q1	America	80
Q2	Europe	40
Q2	America	60
Q3	Europe	NULL
Q3	America	40
Q4	Europe	20
Q4	America	80
Q1	NULL	130
Q2	NULL	100
Q3	NULL	40
Q4	NULL	90
NULL	NULL	360

DICE

```
Select products, sum(revenue)
from sales where Products= 'EL' and Location='Europe'
group by Products;
```

SLICE

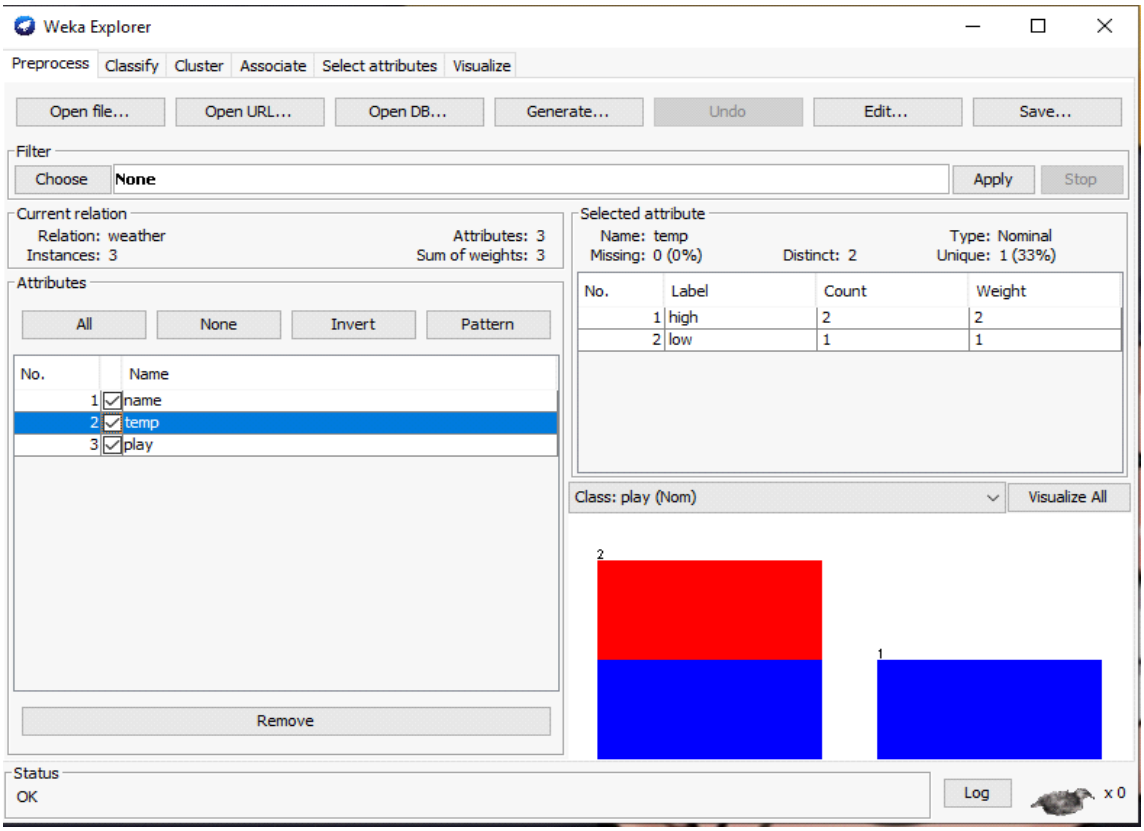
```
Select products, sum(revenue)
from sales where Products= 'OPV'
GROUP  BY Products ;
```

Experiment Name 4 : To study the file formats for the data mining.

SOURCE CODE:

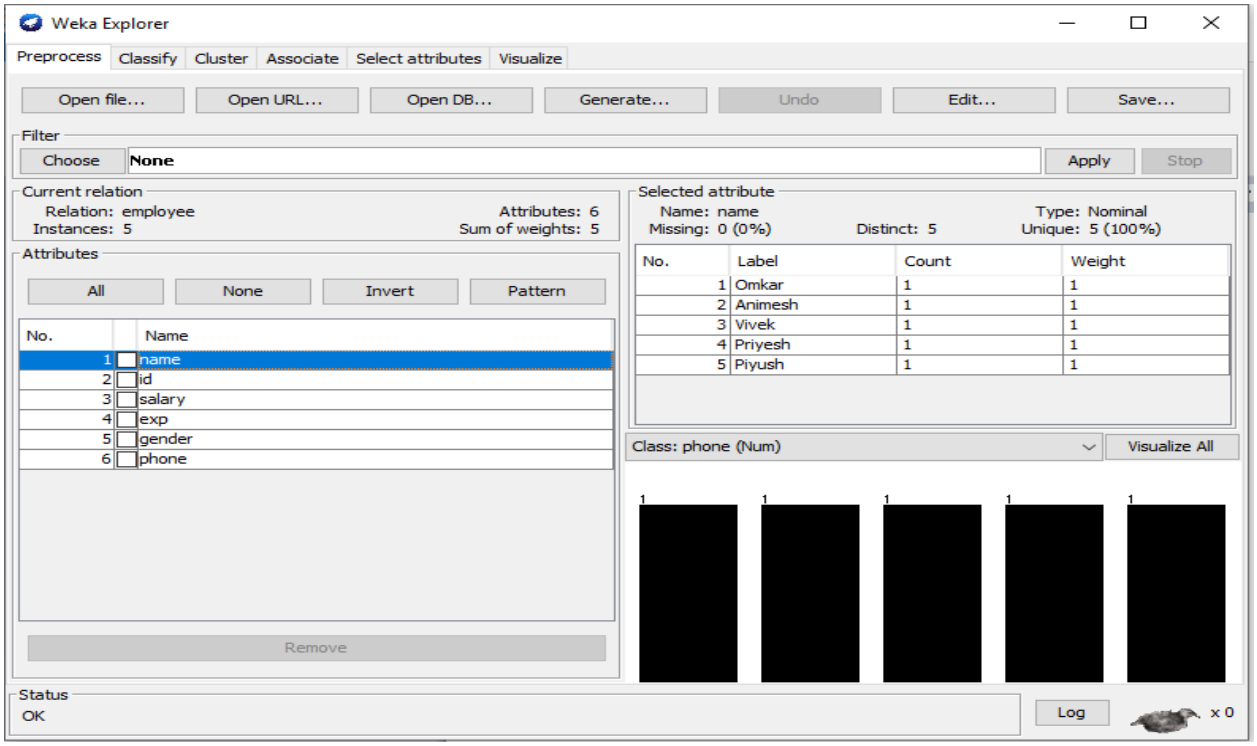
```
@relation weather

@attribute name {sunny,overcast,rainy}

@attribute temp {high,low}

@attribute play {yes,no}

@data

sunny,high,yes

overcast,high,no

rainy,low,yes
```

OUTPUT:

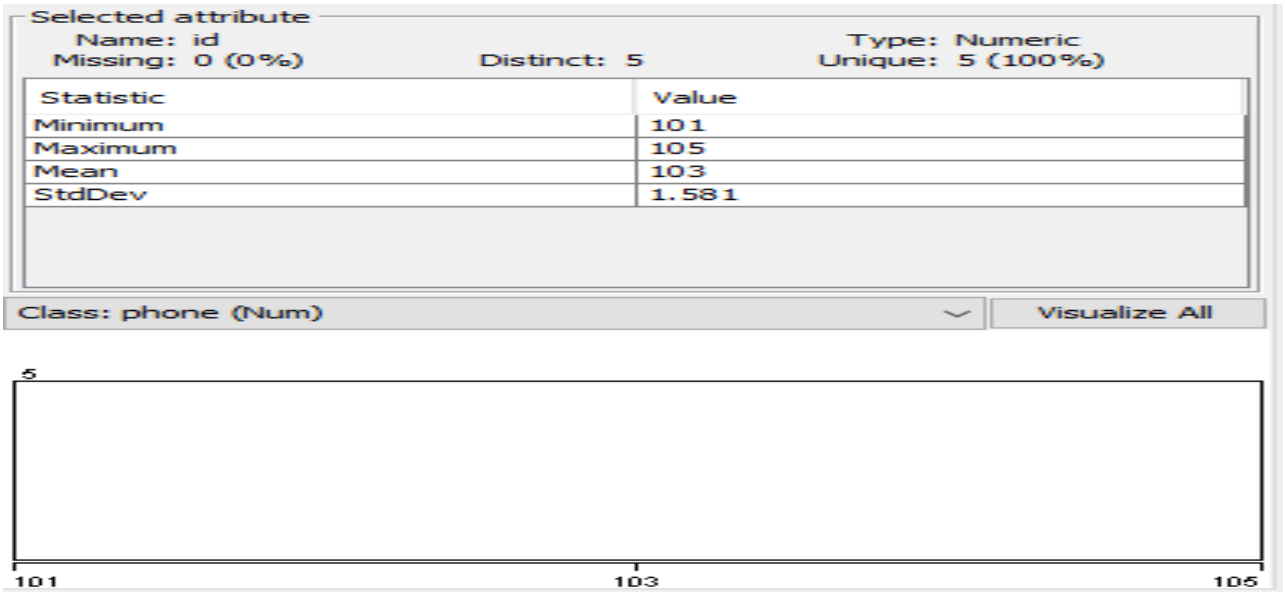


Experiment Name 5 : Create an Employee Table with the help of Data Mining Tool WEKA.

NAME:



ID:



SALARY:

Selected attribute

Name: salary Type: Nominal
Missing: 0 (0%) Distinct: 3 Unique: 1 (20%)

No.	Label	Count	Weight
1	low	2	2
2	medium	1	1
3	high	2	2

Class: phone (Num) Visualize All

Log x 0

EXP:

Selected attribute

Name: exp Type: Numeric
Missing: 0 (0%) Distinct: 4 Unique: 3 (60%)

Statistic	Value
Minimum	1
Maximum	5
Mean	2.6
StdDev	1.517

Class: phone (Num) Visualize All

PHONE:

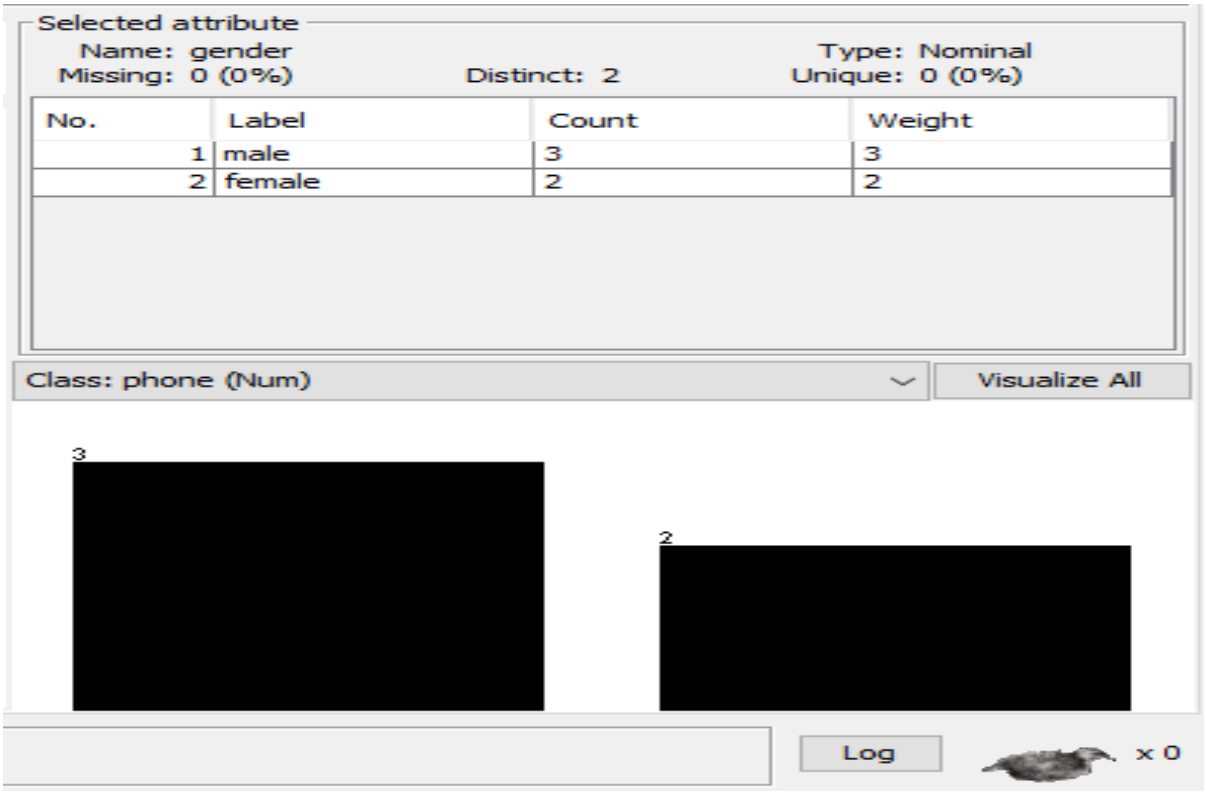
Selected attribute

Name: phone Type: Numeric
Missing: 0 (0%) Distinct: 5 Unique: 5 (100%)

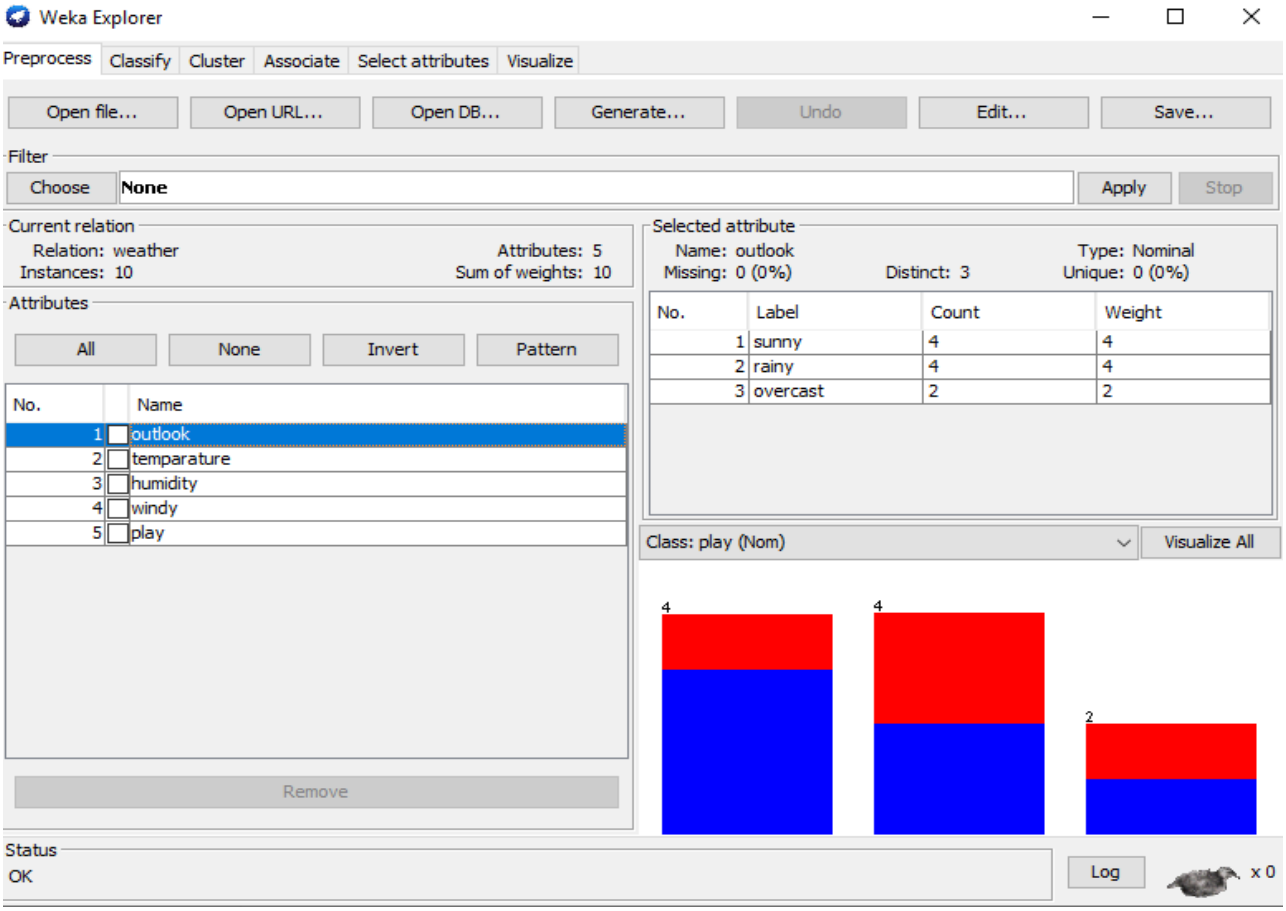
Statistic	Value
Minimum	200200
Maximum	251665
Mean	236530.8
StdDev	21014.081

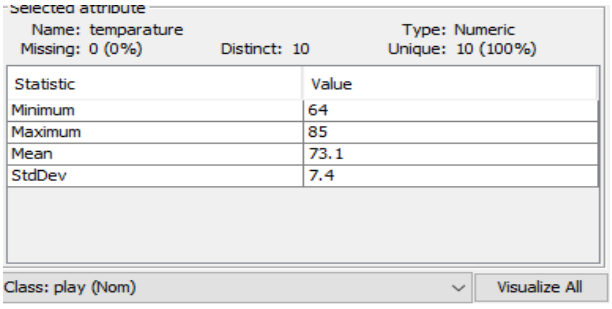
Class: phone (Num) Visualize All

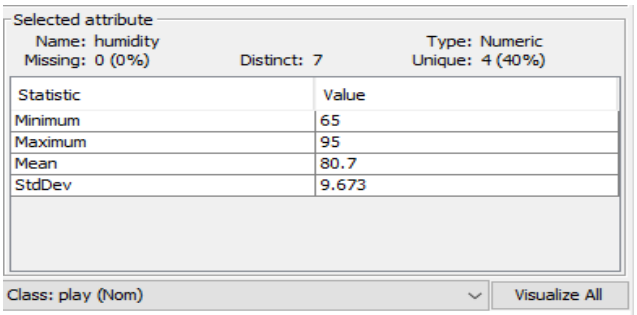
GENDER:


Selected attribute
Name: gender
Missing: 0 (0%)
Distinct: 2
Type: Nominal
Unique: 0 (0%)
No. Label Count Weight
1 male 3 3
2 female 2 2
Class: phone (Num)
Visualize All
3
2
Log
x 0

Experiment Name 6 : Apply Pre-Processing techniques to the training data set of Weather Table





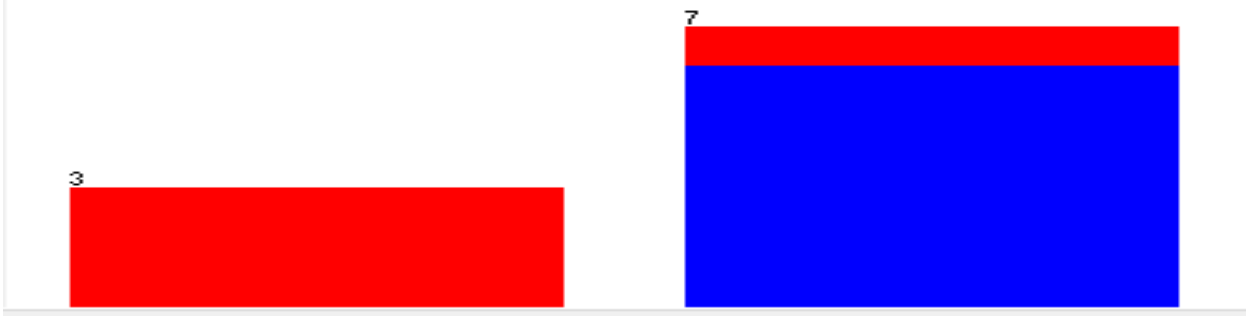


Selected attribute

Name: windy
Missing: 0 (0%)
Distinct: 2
Type: Nominal
Unique: 0 (0%)

No.	Label	Count	Weight
1	true	3	3
2	false	7	7

Class: play (Nom) | Visualize All

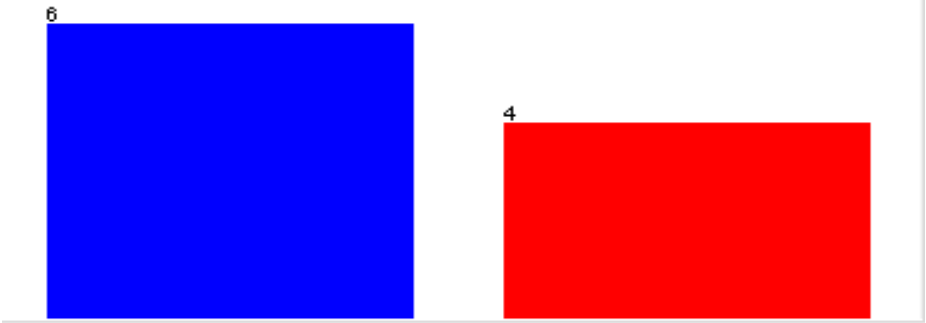


Selected attribute

Name: play
Missing: 0 (0%)
Distinct: 2
Type: Nominal
Unique: 0 (0%)

No.	Label	Count	Weight
1	yes	6	6
2	no	4	4

Class: play (Nom) | Visualize All



Experiment Name 8 : Implementation of Data Discretization (any one) & Visualization (any one)